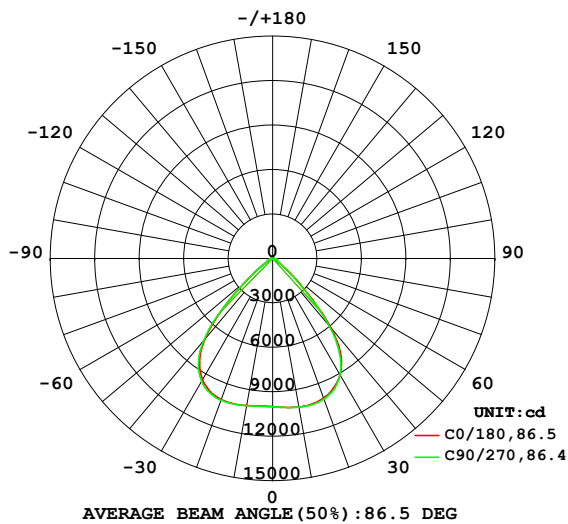


## LUMINAIRE PHOTOMETRIC TEST REPORT

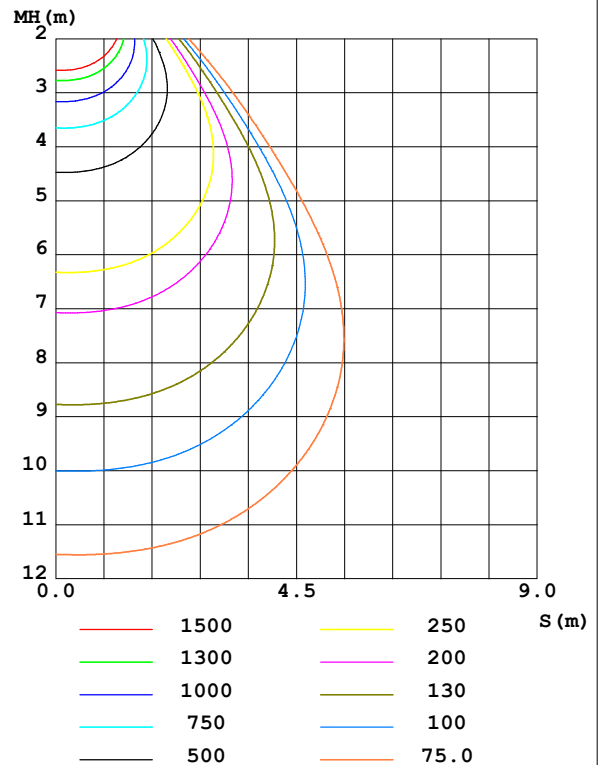
Test:U:230.39V I:0.5443A P:121.97W PF:0.9725 Freq:50.01Hz Lamp Flux:18021.3x1 lm		
NAME: PA-120W	TYPE: 3000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 147.76 lm/W
MODEL	SMD	I <sub>max</sub> (cd)	10217	S/MH (C0/180)	1.29	
NOMINAL POWER(W)	120	LOR (%)	100.0	S/MH (C90/270)	1.30	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	18021	η UP,DN (C0-180)	0.0,47.3	
NOMINAL FLUX(lm)	18021.3	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,52.7	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25	
TEST VOLTAGE(V)	230	η down (%)	100.0	CIBSE SHR MAX	1.30	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.1℃  
Operators:  
Test Date: 2024-12-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity: 50.0%  
Test Distance: 10.026m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	1018	1018	1019	1015	1008	1008	1009	1013	0- 10	962.0	962.0	5.34, 5.34
20	1003	1003	1010	1012	1014	1016	1019	1017	10- 20	2881	3843	21.3, 21.3
30	908.4	907.8	908.1	913.5	945.9	950.7	959.2	952.0	20- 30	4528	8372	46.5, 46.5
40	617.0	609.1	594.2	607.0	714.3	723.8	727.4	721.7	30- 40	5125	13497	74.9, 74.9
50	152.5	145.7	135.8	147.8	224.9	227.8	221.3	222.1	40- 50	3121	16618	92.2, 92.2
60	39.13	39.01	39.12	39.06	47.11	45.48	45.91	45.53	50- 60	785.3	17403	96.6, 96.6
70	24.17	24.43	24.81	24.78	27.35	27.36	27.64	27.25	60- 70	326.3	17730	98.4, 98.4
80	12.76	12.64	12.19	13.35	17.49	17.95	17.55	17.13	70- 80	223.0	17953	99.6, 99.6
90	0.1529	0.1529	0.1529	0.1537	0.1730	0.2209	0.2436	0.2251	80- 90	68.82	18021	100, 100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:X10cd									UNIT: lm		

Conical surface Flux(90deg): 15479 lm

%lum = 85.9%

%lamp = 85.9%

Conical surface Flux(120deg): 17403 lm

%lum = 96.6%

%lamp = 96.6%

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature: 25.1℃  
 Operators:  
 Test Date: 2024-12-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
 Humidity: 50.0%  
 Test Distance: 10.026m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:230.39V I:0.5443A P:121.97W PF:0.9725 Freq:50.01Hz  
Lamp Flux:18021.3x1 lm

NAME: PA-120W

TYPE: 3000K

WEIGHT:

SPEC.:

DIM.:

SERIAL No.:

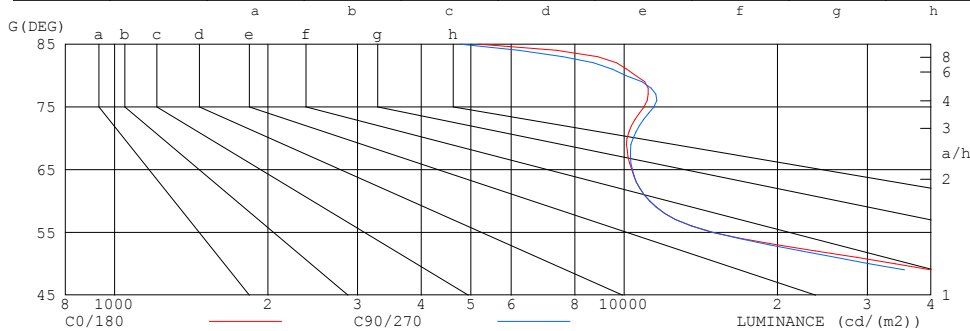
MFR.:

SUR.: 0.149m\*0.149m\*3.14

Shielding Angle:

LUMINANCE LIMITATION CURVES

GLARE	CLASS	ILLUMINANCE (lx)							
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300



LUMINANCE cd/(m2)

G (DEG)	C0/180	C90/270
85	5193	4768
80	10538	10073
75	10944	11435
70	10139	10407
65	10347	10378
60	11226	11224
55	14894	14940
50	34040	30298
45	68984	65450

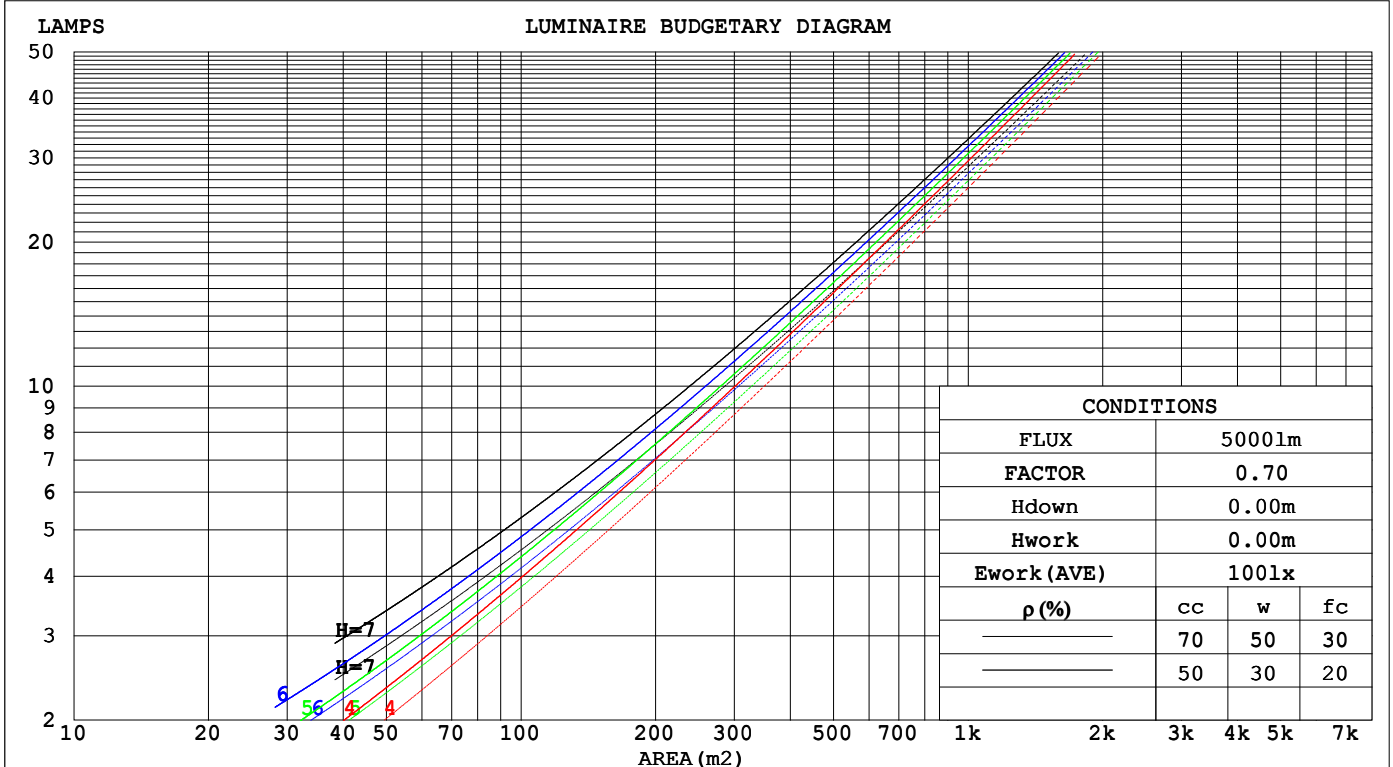
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1℃  
Operators:  
Test Date:2024-12-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity:50.0%  
Test Distance:10.026m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.39V I:0.5443A P:121.97W PF:0.9725 Freq:50.01Hz Lamp Flux:18021.3x1 lm		
NAME: PA-120W	TYPE: 3000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio      Coefficients of Utilization(CU)															
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.09	1.06	1.03	1.07	1.04	1.01	1.02	1.00	.98	.99	.97	.95	.95	.94	.92	.91
2.0	.99	.94	.90	.97	.93	.89	.94	.90	.87	.91	.88	.85	.88	.85	.83	.81
3.0	.90	.84	.79	.89	.83	.79	.86	.81	.77	.84	.80	.76	.81	.78	.75	.73
4.0	.83	.76	.71	.81	.75	.70	.79	.74	.69	.77	.72	.69	.75	.71	.68	.66
5.0	.76	.69	.63	.75	.68	.63	.73	.67	.62	.71	.66	.62	.69	.65	.61	.60
6.0	.70	.62	.57	.69	.62	.57	.67	.61	.57	.66	.60	.56	.64	.59	.56	.54
7.0	.64	.57	.52	.63	.57	.52	.62	.56	.51	.61	.55	.51	.59	.55	.51	.49
8.0	.59	.52	.47	.59	.52	.47	.58	.51	.47	.56	.51	.47	.55	.50	.46	.45
9.0	.55	.48	.43	.54	.48	.43	.53	.47	.43	.52	.47	.43	.52	.46	.43	.41
10.0	.51	.44	.40	.51	.44	.40	.50	.44	.40	.49	.43	.39	.48	.43	.39	.38



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1℃  
Operators:  
Test Date:2024-12-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 $\gamma$  Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity:50.0%  
Test Distance:10.026m [K=1.0000]  
Remarks:

### WEC AND CCEC

Test:U:230.39V I:0.5443A P:121.97W PF:0.9725 Freq:50.01Hz Lamp Flux:18021.3x1 lm																	
NAME: PA-120W						TYPE: 3000K						WEIGHT:					
SPEC.:						DIM.:						SERIAL No.:					
MFR.:						SUR.: 0.149m*0.149m*3.14						Shielding Angle:					

pcc	80%			70%			50%			30%			10%			0	
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
pfc	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)										
0.0																	
1.0	.217	.123	.039	.210	.120	.038	.197	.113	.036	.186	.107	.034	.175	.101	.033		
2.0	.209	.115	.035	.204	.112	.035	.193	.107	.033	.183	.102	.032	.173	.098	.031		
3.0	.200	.106	.032	.195	.104	.031	.185	.100	.031	.176	.097	.030	.168	.093	.029		
4.0	.190	.099	.029	.185	.097	.029	.177	.094	.028	.169	.091	.027	.162	.088	.027		
5.0	.180	.092	.027	.176	.091	.026	.169	.088	.026	.162	.086	.025	.156	.083	.025		
6.0	.171	.086	.025	.168	.085	.024	.161	.083	.024	.155	.081	.024	.150	.079	.023		
7.0	.163	.081	.023	.160	.080	.023	.154	.078	.022	.149	.076	.022	.143	.075	.022		
8.0	.155	.076	.021	.152	.075	.021	.147	.073	.021	.142	.072	.021	.138	.071	.021		
9.0	.148	.071	.020	.145	.071	.020	.141	.070	.020	.136	.068	.020	.132	.067	.019		
10.0	.141	.068	.019	.139	.067	.019	.134	.066	.019	.130	.065	.018	.127	.064	.018		

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.174	.157	.142	.149	.135	.122	.102	.093	.084	.059	.054	.049	.019	.017	.016	
2.0	.161	.132	.108	.138	.114	.093	.095	.079	.065	.055	.046	.038	.018	.015	.012	
3.0	.151	.114	.084	.129	.098	.073	.089	.068	.051	.051	.040	.030	.016	.013	.010	
4.0	.142	.100	.067	.122	.086	.058	.084	.060	.041	.049	.035	.024	.016	.011	.008	
5.0	.135	.089	.055	.116	.077	.048	.080	.054	.034	.046	.031	.020	.015	.010	.007	
6.0	.128	.080	.045	.110	.069	.039	.076	.048	.028	.044	.028	.017	.014	.009	.005	
7.0	.122	.073	.038	.105	.063	.033	.072	.044	.024	.042	.026	.014	.014	.009	.005	
8.0	.116	.067	.033	.100	.058	.028	.069	.041	.020	.040	.024	.012	.013	.008	.004	
9.0	.111	.062	.028	.096	.054	.025	.066	.038	.018	.039	.022	.010	.013	.007	.003	
10.0	.107	.057	.025	.092	.050	.022	.064	.035	.015	.037	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1℃  
Operators:  
Test Date:2024-12-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity:50.0%  
Test Distance:10.026m [K=1.0000]  
Remarks:

## UGR(Unified Glare Rating) Table

Test:U:230.39V I:0.5443A P:121.97W PF:0.9725 Freq:50.01Hz Lamp Flux:18021.3x1 lm										
NAME: PA-120W					TYPE: 3000K			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.:					SUR.: 0.149m*0.149m*3.14			Shielding Angle:		
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
x = 2H y = 2H	15.0	16.2	15.3	16.5	16.8	14.7	15.9	15.1	16.3	16.6
3H	16.4	17.5	16.8	17.8	18.2	16.3	17.4	16.7	17.7	18.1
4H	17.2	18.2	17.6	18.6	19.0	17.2	18.2	17.6	18.5	18.9
6H	17.9	18.8	18.3	19.2	19.6	17.9	18.8	18.3	19.1	19.5
8H	18.1	18.9	18.5	19.3	19.7	18.0	18.9	18.4	19.3	19.7
12H	18.1	19.0	18.6	19.3	19.8	18.0	18.9	18.5	19.2	19.7
4H 2H	15.4	16.4	15.8	16.7	17.1	15.2	16.2	15.6	16.5	16.9
3H	17.2	18.0	17.6	18.4	18.8	17.1	17.9	17.5	18.3	18.7
4H	18.1	18.9	18.6	19.3	19.7	18.1	18.8	18.6	19.3	19.7
6H	19.0	19.6	19.4	20.0	20.5	18.9	19.6	19.4	20.0	20.5
8H	19.2	19.8	19.7	20.2	20.7	19.1	19.7	19.6	20.2	20.6
12H	19.3	19.8	19.8	20.3	20.7	19.2	19.7	19.7	20.2	20.6
8H 4H	18.5	19.1	19.0	19.5	20.0	18.5	19.1	19.0	19.5	20.0
6H	19.5	19.9	20.0	20.4	20.9	19.4	19.9	19.9	20.4	20.9
8H	19.7	20.2	20.3	20.7	21.2	19.7	20.1	20.2	20.6	21.1
12H	19.9	20.2	20.4	20.7	21.3	19.8	20.1	20.3	20.6	21.2
12H 4H	18.5	19.0	19.0	19.5	20.0	18.5	19.1	19.0	19.5	20.0
6H	19.5	19.9	20.0	20.4	21.0	19.5	19.9	20.0	20.4	21.0
8H	19.8	20.2	20.3	20.7	21.3	19.8	20.2	20.3	20.7	21.2
CIE190: 2010										

CIE190: 2010  
Area: 0.0697111 m2

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1℃  
Operators:  
Test Date:2024-12-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity:50.0%  
Test Distance:10.026m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:230.39V I:0.5443A P:121.97W PF:0.9725 Freq:50.01Hz Lamp Flux:18021.3x1 lm		
NAME: PA-120W	TYPE: 3000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:

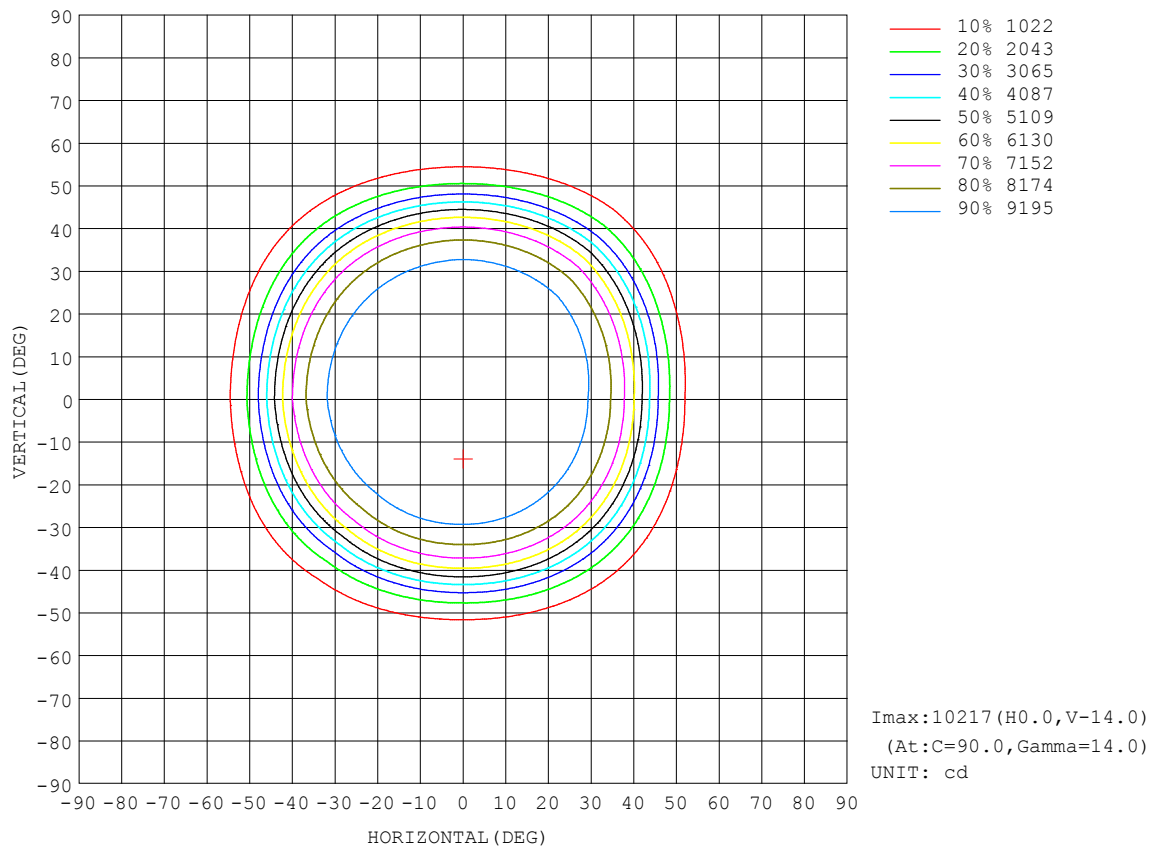
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	76	67	62	75	67	62	74	67	62	57
0.80	85	77	72	84	77	72	83	76	71	66
1.00	92	84	79	91	84	79	89	84	78	73
1.25	97	90	85	96	89	85	94	88	84	79
1.50	100	94	90	99	93	89	97	92	88	83
2.00	105	99	95	103	98	94	100	96	93	87
2.50	107	102	98	105	101	97	102	98	95	89
3.00	109	105	101	107	103	100	104	100	98	91
4.00	111	108	105	109	106	103	106	103	101	93
5.00	113	110	107	111	108	106	107	104	103	95
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.1℃  
Operators:  
Test Date: 2024-12-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity: 50.0%  
Test Distance: 10.026m [K=1.0000]  
Remarks:

### ISOCANDELA DIAGRAM

Test:U:230.39V I:0.5443A P:121.97W PF:0.9725 Freq:50.01Hz Lamp Flux:18021.3x1 lm		
NAME: PA-120W	TYPE: 3000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:



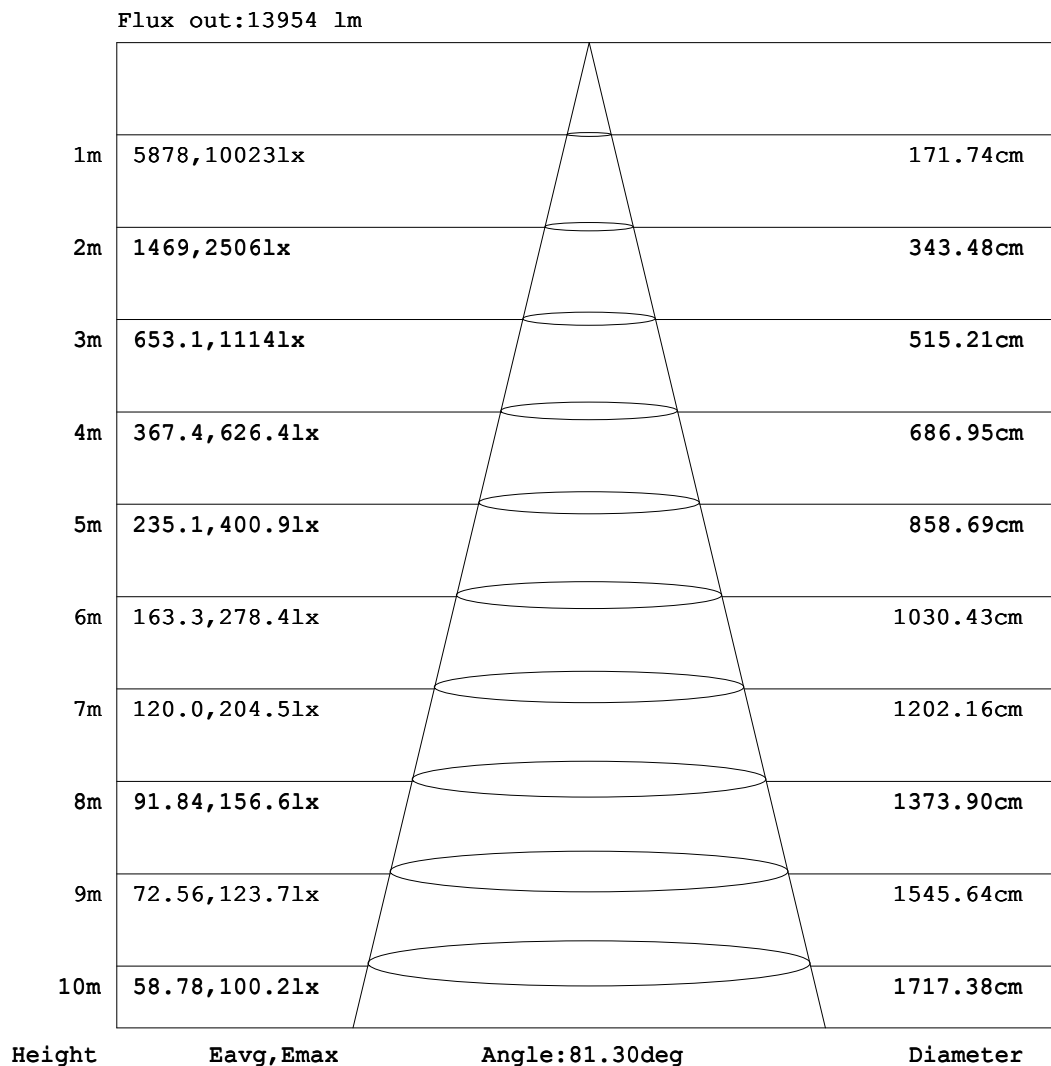
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1℃  
Operators:  
Test Date:2024-12-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity:50.0%  
Test Distance:10.026m [K=1.0000]  
Remarks:



### AAI Figure

Test:U:230.39V I:0.5443A P:121.97W PF:0.9725 Freq:50.01Hz Lamp Flux:18021.3x1 lm		
NAME: PA-120W	TYPE: 3000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:



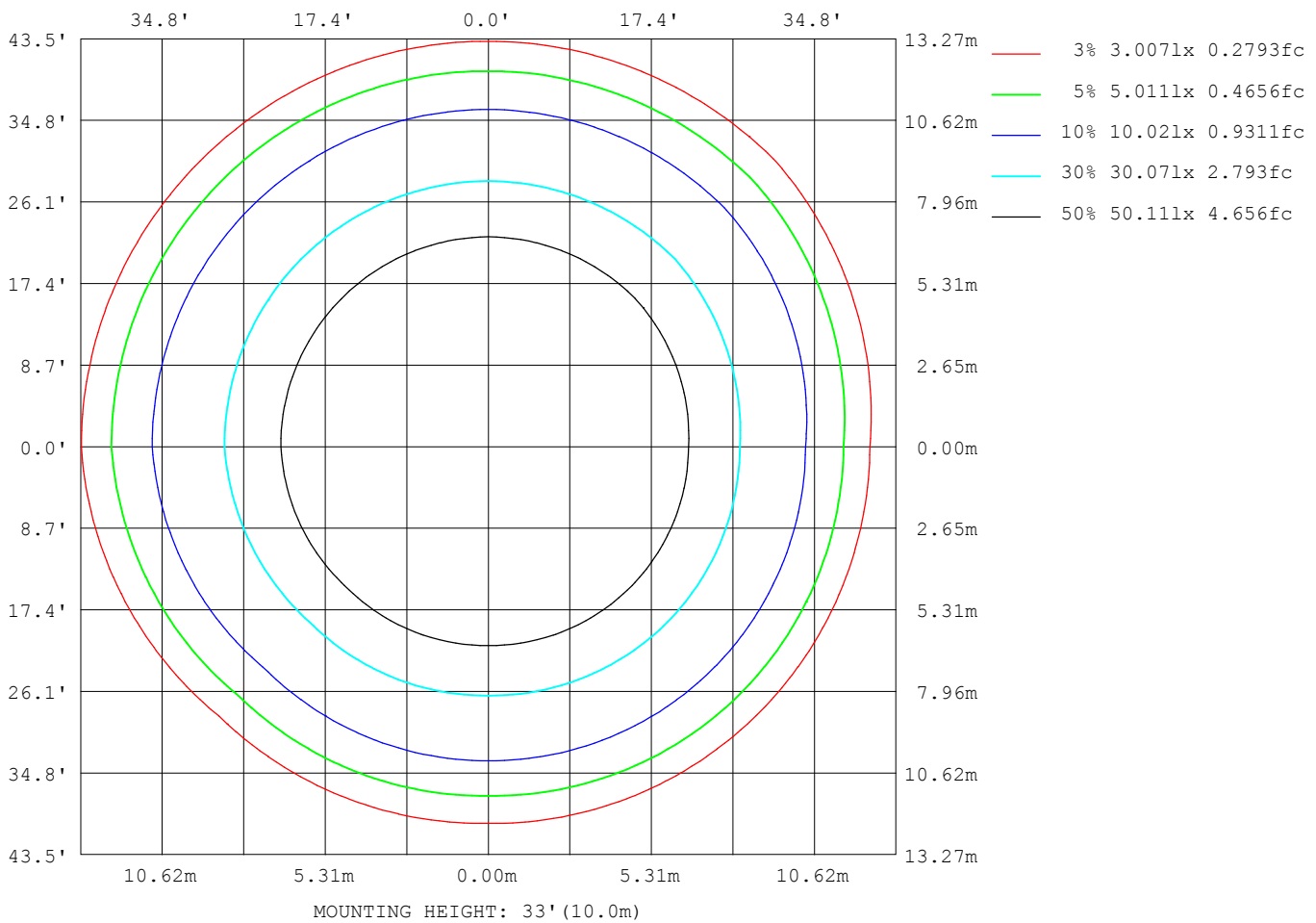
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1℃  
Operators:  
Test Date:2024-12-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity:50.0%  
Test Distance:10.026m [K=1.0000]  
Remarks:

### ISOLUX DIAGRAM

Test:U:230.39V I:0.5443A P:121.97W PF:0.9725 Freq:50.01Hz Lamp Flux:18021.3x1 lm		
NAME: PA-120W	TYPE: 3000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.1°C  
Operators:  
Test Date: 2024-12-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity: 50.0%  
Test Distance: 10.026m [K=1.0000]  
Remarks:

## LED Avg.L Report

Test:U:230.39V I:0.5443A P:121.97W PF:0.9725 Freq:50.01Hz Lamp Flux:18021.3x1 lm		
NAME: PA-120W	TYPE: 3000K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.149m*0.149m*3.14	Shielding Angle:

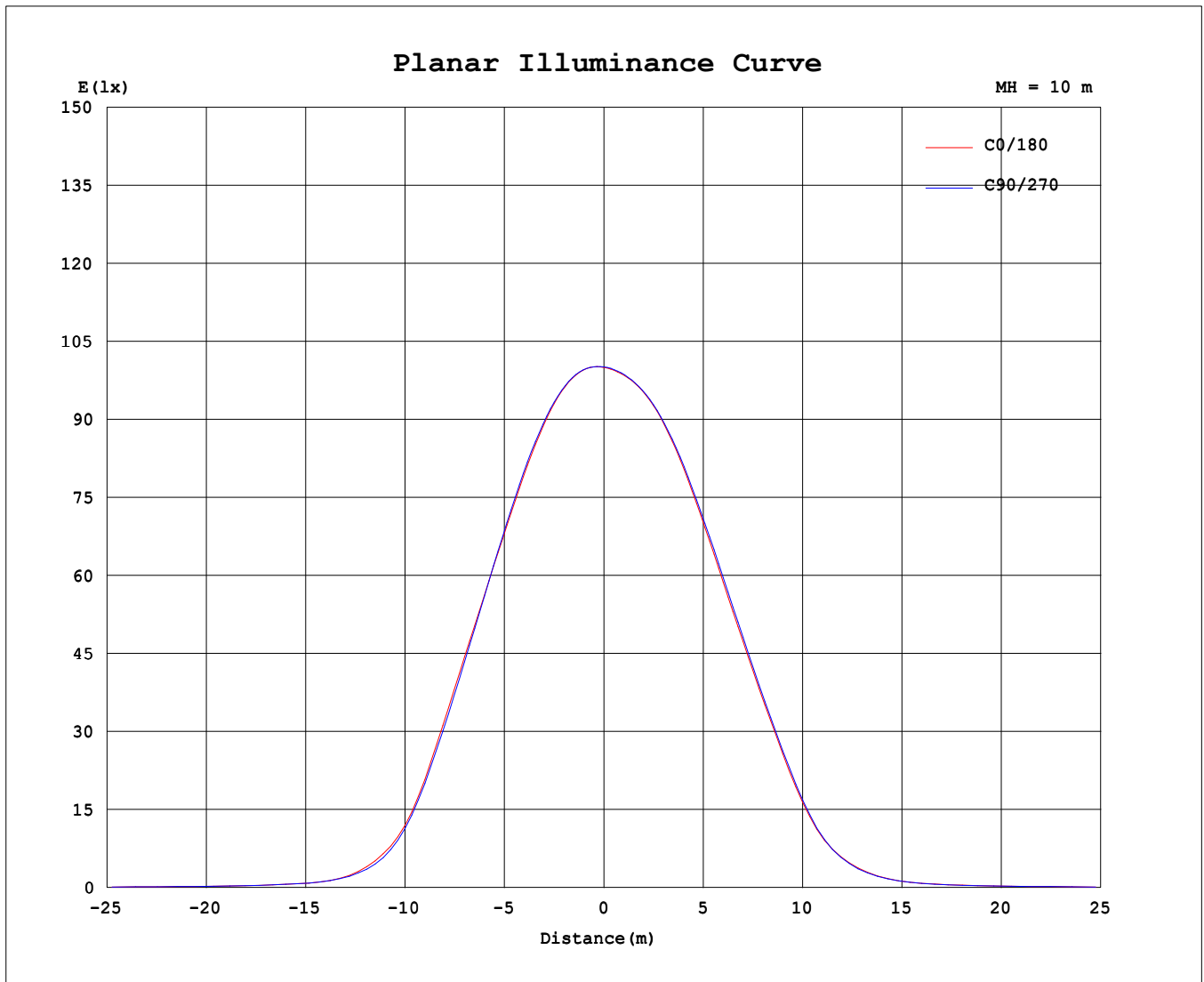
AvgL	cd/m2
L_0~180 (65) av	11018
L_0~180 (75) av	11633
L_0~180 (85) av	9378
L_90~270 (65) av	11049
L_90~270 (75) av	12044
L_90~270 (85) av	9190
L_45 (65) av	10958
L_45 (75) av	11832
L_45 (85) av	9435

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.1℃  
Operators:  
Test Date:2024-12-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity:50.0%  
Test Distance:10.026m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.1°C  
Operators:  
Test Date: 2024-12-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.462  
Humidity: 50.0%  
Test Distance: 10.026m [K=1.0000]  
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.462
Humidity:50.0%
Test Distance:10.026m [K=1.0000]
Remarks:

```